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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,492	01/17/2002	Gerrit Cornelis Langelaar	PHNL 010062	5632

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EXAMINER

DOAN, TRANG T

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/056,492	LANGELAAR, GERRIT CORNELIS	
	Examiner	Art Unit	
	Trang Doan	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/26/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/17/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-19 have been examined. Claims 1, 5-9 have amended.

Priority

2. The application is filed on 01/17/2002 but claims the benefit of foreign priority has been made and acknowledged.
3. Therefore, the effective filing date for the subject matter defined in the pending claims in this application is 01/23/2001 on the benefit of foreign priority date.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1 and 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Referring to claims 1 and 8-9, the examiner is not clear whether modification to the sample equals to the 1st value or modification to the sample equals to the modification of the 1st value. Appropriate correction is required.
7. Referring to claims 2 and 10, "signal samples having the smallest non-zero value" is not clear because the smallest non-zero value have more than one outcome.

Claim Rejections - 35 USC § 103

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8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6373960 in view of Kawamura (US Patent 6600828) (Kawamura).

10. Regarding to claim 1, Conover teaches the act of modifying signal samples in accordance with a watermark pattern (Conover: see Abstract section), Conover does not explicitly disclose wherein said modifying act is applied to signal samples if the modified signal sample equals the first value due to said modification, and wherein said modifying act is not applied to signal samples if the modified signal sample does not equal the first value due to said modification. Kawamura discloses wherein said modifying act is applied to signal samples if the modified signal sample equals the first value due to said modification (Kawamura: see figure 1, column 1 lines 25-53 and column 7 lines 55-64), and wherein said modifying act is not applied to signal samples if the modified signal sample does not equal the first value due to said modification (Kawamura: see figure 1, column 1 lines 25-53 and column 7 lines 55-64). Therefore, it would have been obvious to one ordinary skill in the art to apply the teaching of Kawamura into Conover's system to have attracted attention as security and copyright protection technologies in the electronic distribution industry, in which handling information of digital content, such as the name of the owner of the copyright and the identification (ID) of the purchaser, is embedded in the digital information of the image in

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such a manner as to be difficult for the human eye to see, making it possible to track unauthorized use of illegal copies (Kawamura: column 1 lines 16-24).

11. Regarding to claim 2, Conover does not explicitly disclose wherein the first value is zero and the signal samples qualified for modification are signal samples having the smallest non-zero value. Kawamura teaches wherein the first value is zero and the signal samples qualified for modification are signal samples having the smallest non-zero value (Kawamura: see figure 1, column 1 lines 25-53 and column 7 lines 55-64). Therefore, it would have been obvious to one ordinary skill in the art to apply the teaching of Kawamura into Conover's system to have attracted attention as security and copyright protection technologies in the electronic distribution industry, in which handling information of digital content, such as the name of the owner of the copyright and the identification (ID) of the purchaser, is embedded in the digital information of the image in such a manner as to be difficult for the human eye to see, making it possible to track unauthorized use of illegal copies (Kawamura: column 1 lines 16-24).

12. Regarding to claim 3, Conover in view of Kawamura teaches wherein the signal samples have been quantized with a quantizer step size, and the signal samples qualified for modification are signal samples being quantized with a step size, which is less than a predetermined threshold (Conover: see column 4 lines 62-67 and column 5 lines 1-27).

13. Regarding to claim 4, Conover in view of Kawamura teaches wherein the information signal is divided into sections and the number of signal samples qualified for

modification is limited to a predetermined maximum per section (Conover: column 5 lines 54-57 and column 6 lines 1-18).

14. Regarding to claim 5, Conover in view of Kawamura teaches wherein the signal samples of a section have been quantized in accordance with a quantizer step scale, the method including the act of controlling said maximum of modified signal samples in dependence upon said quantizer step scale (Conover: column 3 lines 42-67 and column 4 lines 1-5).

15. Regarding to Claim 6, Conover in view of Kawamura teaches wherein the information signal is divided into sections and the signal samples of a section have been quantized in accordance with a quantizer step scale, the method including the act of controlling a position of the signal samples qualified for modification within a section in dependence upon said quantizer step scale (Conover: column 3 lines 42-67 and column 4 lines 1-5 and column 4 lines 62-67 and column 5 lines 1-27).

16. Regarding to claim 7, Conover in view of Kawamura teaches decoding the variable-length code words into respective first and further signal samples prior to said modifying act (Conover: column 9 lines 55-67 and column 10 lines 1-20); merging the modified signal sample with succeeding or preceding first signal samples to obtain a new run of first signal samples (Conover: column 10 lines 6-20), and encoding the new run of first signal samples and a subsequent or preceding further signal sample into a new variable-length code word (Conover: column 10 lines 6-29).

17. Regarding to claim 8, this claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

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18. Regarding to claim 9, this claim has limitations that is similar to those of claims 1 and 8, thus it is rejected with the same rationale applied against claims 1 and 8 above.

19. Regarding to claim 10, Conover in view of Kawamura wherein the portion configured to produce the modified and unmodified signal samples is configured to only modify signal samples having a smallest non-zero value of the signal samples (Conover: see column 6 lines 1-18).

20. Regarding to claim 11, Conover in view of Kawamura a portion configured to quantize the signal samples with a quantizer step size, wherein the portion configured to produce the modified and unmodified signal samples is configured to only modify signal samples quantized with a step size which is less than a predetermined threshold (Conover: see column 4 lines 62-67 and column 5 lines 1-27).

21. Regarding to claim 12, Conover in view of Kawamura a portion configured to divide the signal samples into sections, wherein the portion configured to produce the modified and unmodified signal samples is configured to only modify a predetermined number of signal samples per section (Conover: column 5 lines 54-57 and column 6 lines 1-18).

22. Regarding to claim 13, Conover in view of Kawamura a portion configured to quantize the signal samples with a quantizer step scale, wherein the portion configured to produce the modified and unmodified signal samples is configured to modify signal samples in dependence upon the quantizer step scale (Conover: column 3 lines 42-67 and column 4 lines 1-5).

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23. Regarding to claim 14, Conover in view of Kawamura a portion configured to divide the signal samples into sections (Conover: column 5 lines 54-57 and column 6 lines 1-18); and a portion configured to quantize the signal samples with a quantizer step scale, wherein the portion configured to produce the modified and unmodified signal samples is configured to control a position of the signal samples modified within a section in dependence upon the quantizer step scale (Conover: column 3 lines 42-67 and column 4 lines 1-5).

24. Regarding to claim 15, this claim has limitations that is similar to those of claim 7, thus it is rejected with the same rationale applied against claim 7 above.

25. Regarding to claim 16, Conover in view of Kawamura wherein the watermark is represented by DCT coefficients and the portion configured to modify the signal samples is configured to modify the signal samples in accordance with a corresponding sign of the watermark DCT coefficients (Conover: column 11 lines 31-44).

26. Regarding to claim 17, Conover in view of Kawamura wherein the signal samples are represented by DCT coefficients and the portion configured to modify the signal samples is configured to modify a range of signal sample DCT coefficients in accordance with the corresponding sign of the watermark DCT coefficients (Conover: column 11 lines 17-67).

27. Regarding to claim 18, Conover in view of Kawamura wherein the watermark is represented by DCT coefficients and the portion configured to modify the signal samples is configured to modify the signal samples in accordance with only a plurality of most significant DCT coefficients (Conover: column 11 lines 17-67).

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28. Regarding to claim 19, Conover in view of Kawamura wherein the information signal contains field-coded DCT blocks and frame-coded DCT blocks, and wherein the portion configured to modify signal samples is configured to modify field-coded DCT blocks with a first watermark and is configured to modify frame-coded DCT blocks with a second watermark (Conover: column 11 lines 17-67 and column 12 lines 1-60).

Response to Arguments

1. Applicant's arguments filed 07/26/2006, with respect to the rejection(s) of claim(s) 1-19 under Conover have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Conover et al. (US Patent 6373960) and further in view of Kawamura.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang Doan whose telephone number is (571) 272-0740. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Trang Doan
Examiner
Art Unit 2131

T.D.
04/28/2006


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